

young children, reserving open operations for the older and more difficult types.

Reduction should be accomplished as soon as the child is old enough so that soiling of plaster cast can be reasonably controlled. The limb is immobilized for four to six months after reduction.

Manipulative reduction becomes increasingly more difficult and disappointing after the age of 6 years.

World War experience has led to the application of skeletal traction to old resistant cases. (See "The Treatment of Old Congenital Dislocation of the Hip," Abbott, *Arch of Surg.*, May, 1926.) Reconstructive and stabilizing operations upon the hip-joint perfected by Albee, Whitman and others, have opened the way for vastly improving the most extreme cases.

The literature is very voluminous. (Lorenz' book "Die Sogenannte Angeborene Hüftverrenkung, ihre Pathologie und Therapie, Stuttgart, Enke," 1920, carries a thirty-page bibliography.)

The following conclusions seem warranted:

1. A stable and normally movable hip without pain or shortening is the ideal to be striven for.
2. Reduction by gentle manipulation is usually possible in children up to five years; functional cures upward of 70 per cent.
3. Many cases up to the age of 12 years may be successfully treated by manipulation, but these older cases must be carefully selected.
4. Stability with mobility and lessened shortening may be secured by special operations in many severe cases which cannot be completely cured.
5. Open operation rather than extreme force in manipulative reduction is the method of choice in older and more resistant cases.
6. Skeletal traction applied over a considerable period facilitates operative correction and makes for better results in certain types of difficult dislocation.
7. Normal function is often observed in cases where the x-ray, years after reduction, shows definite distortion, of the femoral head or the acetabulum or both.
8. The integrity of the hip musculature must be preserved or restored if the hip is to be stable and movable.
9. Contracture of the capsule and other soft tissues may make open operation the method of choice even in a very young patient.
10. In extreme cases, stability with lessened shortening results from arthrodesing operations and is a great improvement over a short, painful and unstable limb.
11. Incision cannot per se take the place of stretching manipulations, but the blind uncertainty of "bloodless" reduction is a serious danger.
12. A combination of (a) preliminary stretching, (b) incision including cutting of those resistant structures which can with less damage be thus dealt with, and (c) stretching manipulations during the course of operation will become the routine procedure in an increasingly larger percentage of congenital hip dislocations.

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## Syphilology

**Parenteral Milk Injection in Syphilis**—Parenteral milk injection is finding a place in the therapy of syphilis, especially neurosyphilis.<sup>1</sup> It is more easily controlled than malaria inoculation, and for which it is apparently an efficient substitute. The mode of action of milk injection and malaria treatment is the same—stimulation of the immuno-defense reaction of the host.

Just what element of malaria therapy is responsible for its beneficial action has been an interesting study. A clinical application<sup>3,5</sup> of Schamberg's<sup>4</sup> experiments on heat therapy in rabbit syphilis has been so far disappointing. The fact that patients who are helped by malarial treatment usually have a leucocytosis,<sup>5</sup> while malaria commonly presents a leucopenia, also indicates that some other factor besides the fever exerts the favorable influence. The most logical interpretation of malaria therapy is that of Joseph Schumacher.<sup>6</sup> The lipoid-albumin compounds liberated from the disintegrating erythrocytes and spleen cells act as an autogenous antigen, which incites the production of lipoproteolytic ferments. His experiments show that parenteral injection of albumin, lipid, or lipid and albumin simultaneously but separately, brings about the production only of lipolytic or proteolytic ferments, neither of which has any action on the spirochaete. To produce a lipoproteolytic ferment requires the injection of a lipid and albumin combination or mixture. Schumacher demonstrated that this ferment is spirilicidal. The so-called nonspecific therapy is only nonspecific in a bacteriological sense; it is very specific therapy biochemically. Schumacher showed that by simultaneous administration of arsphenamine and lipid-albumin the therapeutic index of the former was much increased. The skin is important in the production of lipoproteolytic ferments, and lack of skin lesions will permit the spirochaete to become well entrenched in the nervous system during early stages of the disease. Lipoid-albumin injection offers an easily controlled therapeutic equivalent of skin lesions.

A very convenient lipid-albumin antigen is sterilized skimmed milk. Some of the commercial ampoules contain only lactalbumin, which incites the production of proteolytic ferments only and are useless in treating syphilis. One must bear in mind that milk injections will produce a positive blood Wassermann<sup>7,8</sup> in a nonsyphilitic subject, such reaction being removable by arsphenamine, so serological improvement only occurs if arsphenamine is administered simultaneously, or when administered later.

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